Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

<u>Listing of Claims</u>:

1-41. Cancelled.

42. (New) A compound of general formula I:

$$\begin{bmatrix} A \\ D \\ S \\ O \end{bmatrix} \begin{bmatrix} H \\ O \\ O \\ O \end{bmatrix} \begin{bmatrix} OR^1 \\ OR^1 \\ OR^1 \\ OR^1 \end{bmatrix}$$

Ι

wherein:

each R^1 independently represents hydrogen, C_{1-6} alkyl, C_{1-6} haloalkyl, phenyl, heteroaryl or phenyl C_{1-3} alkyl, where all phenyl and heteroaryl rings can be optionally substituted with one or more halogen, C_{1-4} alkyl or C_{1-4} alkoxy groups, or both substituents R^1 may be taken together to form a saturated or partially unsaturated 5- or 6-membered ring, which can be optionally fused to a benzene ring;

A represents an unsaturated or partially unsaturated 5- or 6-membered ring which can optionally contain from 1 to 3 heteroatoms selected from N, O and S, where the substituents L and D are placed on adjacent atoms of ring A, and where additionally A can be optionally substituted with one or more substituents R^2 ;

L represents a single bond, -O-, -S- or $-NR^3-$;

B represents C_{1-6} alkyl or a ring selected from phenyl, heteroaryl and C_{3-7} cycloalkyl, where all said rings can be optionally substituted with one or more substituents R^4 ;

D represents phenyl or pyridine, each of which can be optionally substituted with one or more halogens;

the groups A and $-SO_2NHP(O)(OR^1)_2$ are placed on ring D in para position with respect to one another;

each R^2 independently represents halogen, cyano, nitro, carboxy, C_{1-4} alkyl, C_{2-4} alkenyl, C_{2-4} alkynyl, C_{1-4} haloalkyl, hydroxy, C_{1-4} hydroxyalkyl, C_{1-4} alkoxy, C_{1-4} haloalkoxy, C_{1-4} alkylthio, amino, C_{1-4} alkylamino, C_{1-4} dialkylamino, formyl, C_{1-4} alkylcarbonyl, C_{1-4} alkoxycarbonyl, C_{1-4} haloalkoxycarbonyl, C_{1-4} alkoxy C_{1-3} alkyl, C_{1-4} alkylcarbonyloxy C_{1-3} alkyl, C_{3-7} cycloalkyl C_{1-4} alkoxy C_{1-3} alkyl or C_{3-7} cycloalkoxy C_{1-3} alkyl, or two substituents R^2 on the same carbon atom can be taken together to form an oxo group; R^3 represents hydrogen or C_{1-4} alkyl;

each R^4 independently represents halogen, cyano, nitro, carboxy, C_{1-4} alkyl, C_{1-4} haloalkyl, hydroxy, C_{1-4} hydroxyalkyl, C_{1-4} alkoxy, C_{1-4} haloalkoxy, C_{1-4} alkylthio, amino, C_{1-4} alkylamino, C_{1-4} dialkylamino, formyl, C_{1-4} alkylcarbonyl, C_{1-4} alkoxycarbonyl or C_{1-4} haloalkoxycarbonyl, or two substituents R^4 on the same carbon atom can be taken together to form an oxo group, and additionally one of the substituents R^4 can represent a saturated, unsaturated or partially unsaturated 5- or 6-membered ring which can optionally contain from 1 to 3 heteroatoms selected from N, O and S and which can be optionally substituted with one or more substituents R^5 ; each R^5 independently represents halogen, hydroxy, nitro, cyano, amino, C_{1-4} alkyl, C_{1-4} haloalkyl, C_{1-4} alkoxy or C_{1-4} alkylcarbonyl,

or two substituents R⁵ on the same carbon atom can be taken together to form an oxo group; and heteroaryl in the above definitions represents pyridine, pyrazine, pyrimidine or pyridazine; or a salt and or solvate thereof.

43. (New) A compound according to claim 42 wherein A represents imidazole, pyrazole, isoxazole, oxazole, thiazole, 2,5-dihydrofuran, thiophene, pyridine, 4*H*-pyran, cyclopentene, 2,3-dihydrooxazole or 4,5-dihydropyrazole which can be optionally substituted with one to four substituents R².

- 44. (New) A compound according to claim 43 wherein A represents imidazole, pyrazole, isoxazole or oxazole which can be optionally substituted with one or two substituents \mathbb{R}^2 .
- 45. (New) A compound according to claim 44 wherein A represents imidazole which can be optionally substituted with one substituent \mathbb{R}^2 .
- 46. (New) A compound according to claim 42 wherein each R^2 independently represents halogen, C_{1-4} alkyl or C_{1-4} haloalkyl, or two substituents R^2 on the same carbon atom can be taken together to form an oxo group.
- 47. (New) A compound according to claim 42 wherein D represents phenyl optionally substituted with a fluoro atom.
- 48. (New) A compound according to claim 42 wherein L represents a single bond.
- 49. (New) A compound according to claim 42 wherein B represents phenyl optionally substituted with one to three groups R^4 or B represents cyclohexyl.
- 50. (New) A compound according to claim 42 wherein each R^4 independently represents halogen, C_{1-4} alkyl, C_{1-4} alkoxy or C_{1-4} haloalkyl.

51. (New) A compound according to claim 42 of formula Id:

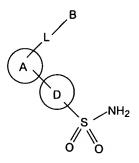
Id

wherein:

B represents phenyl optionally substituted with one to three groups R^4 ; and each R^4 independently represents halogen, C_{1-4} alkyl, C_{1-4} alkoxy or C_{1-4} haloalkyl.

- 52. (New) A compound according to claim 51 wherein B represents 3-fluoro-4-methoxyphenyl.
- 53. (New) A compound according to claim 42 wherein each R^1 independently represents hydrogen, C_{1-6} alkyl or phenyl optionally substituted with one or more halogen, C_{1-4} alkyl or C_{1-4} alkoxy groups.
- 54. (New) A compound according to claim 42 wherein the compound is N-[4-[4-chloro-5-(3-fluoro-4-methoxyphenyl)] imidazol-1-yl]phenylsulfonyl]phosphoramidic acid, or a salt or solvate thereof.

- 55. (New) A compound according to claim 54 wherein the compound is N-[4-[4-chloro-5-(3-fluoro-4-methoxyphenyl)imidazol-1-yl]phenylsulfonyl]phosphoramidic acid.
- 56. (New) Process for preparing a compound of formula I according to claim 42 which comprises:
- (a) when in a compound of formula I each \mathbb{R}^1 is different from hydrogen, reacting a sulfonamide of formula II



ΙI

wherein A, L, B and D have the meaning described in claim 42, with a compound of formula III

$$XP(O)(OR^{1a})_2$$

III

wherein X represents H or Cl and wherein each R^{1a} independently represents any of the meanings described for R^{1} in claim 42 except for hydrogen, in the presence of a base, or alternatively,

reacting a sulfonamide of formula II in which the group $-SO_2NH_2$ is in anionic form with a compound of formula III; or (b) when in a compound of formula I each R^1 represents hydrogen, hydrolyzing a compound of formula Ia'

Ia'

wherein A, L, B and D have the meaning described in claim 42 and wherein $R^{1a'}$ represents any of the meanings described for R^1 in claim 42 except for hydrogen and benzyl, or alternatively, hydrogenating a compound of formula Ia''

Ia"

wherein A, L, B and D have the meaning described in claim 42; or (c) when in a compound of formula I one of the substituents R¹ represents hydrogen and the other is different from hydrogen, monodealkylating a compound of formula Ia'''

Ia'''

wherein A, L, B, D and R^{1a} have the meaning described above and wherein $R^{1a'''}$ represents C_{1-6} alkyl, C_{1-6} haloalkyl or phenyl C_{1-3} alkyl, where the phenyl group can be optionally substituted with one or more halogen, C_{1-4} alkyl or C_{1-4} alkoxy groups; or (d) transforming, in one or a plurality of steps, a compound of formula I into another compound of formula I.

57. (New) The process of claim 56, which further comprises reacting the compound of formula I with a base or an acid to give the corresponding addition salt.

- 58. (New) A pharmaceutical composition which comprises an effective amount of a compound of formula I according to claim 42 or a pharmaceutically acceptable salt or solvate thereof and one or more pharmaceutically acceptable excipients.
- 59. (New) A method for the treatment or prevention of diseases mediated by cyclooxygenase-2, which comprises administering to a subject in need thereof an effective amount of a compound of formula I according to claim 42 or a pharmaceutically acceptable salt or solvate thereof.
- 60. (New) The method of claim 58 wherein the disease mediated by cyclooxygenase-2 is selected from inflammation, pain, fever, pathologies associated with prostanoid-induced smooth muscle contraction, preneoplasic disorders, cancer, cerebral infarction, epilepsy, type I diabetes, neurodegenerative diseases and vascular diseases with an inflammatory component.
- 61. (New) The method of claim 59 wherein the disease mediated by cyclooxygenase-2 is selected from inflammation, pain and fever.
- 62. (New) The method of claim 59 wherein the disease mediated by cyclooxygenase-2 is selected from the group consisting of: pain resulting from surgery or dental surgery; low back and neck pain; headache; toothache; pain associated with cancer; neuralgia; arthritis; degenerative joint diseases; gout;

ankylosing spondylitis; tendinitis; pain or inflammation associated with sprains, strains or other traumatisms; synovitis; myosotis; dysmenorrhea; inflammatory bowel disease; ocular inflammatory diseases, including conjunctivitis and endophthalmitis; corneal transplants; skin inflammatory diseases; systemic inflammatory processes; bursitis; lupus erythematosus; common cold; rheumatic fever; symptoms associated with influenza or other viral infections; preterm labour; asthma; bronchitis; familial adenomatous polyposis; liver cancer; bladder cancer; pancreatic cancer; ovarian cancer; prostate cancer; cervical cancer; lung cancer; breast cancer; skin cancer; gastrointestinal cancers; cerebral infarction; epilepsy; type I diabetes; dementia; Parkinson's disease; amyotrophic lateral sclerosis; and atherosclerosis.